AMENDMENTS TO THE SPECIFICATION

On page 7, and continuing onto page 8, please amend Paragraph **[0039]** as follows:

[0039] Using a temporal coupled-mode theory, the scattering matrix for a single guided resonance in general can be written in the following form

$$S=\begin{bmatrix} r & t \\ t & r \end{bmatrix}=\begin{bmatrix} r_d & t_d \\ t_d & r_d \end{bmatrix}+\frac{1/\tau}{j(\omega-\omega_0)+1/\tau}\begin{bmatrix} -(r_d \pm t_d) & (r_d \pm t_d) \\ (r_d \pm t_d) & -(r_d \pm t_d) \end{bmatrix} \quad (1)$$

where ω_0 and τ are the center frequency and the lifetime of the resonance, r and t are the transmission and reflection coefficients of the resonator system, and r_d and t_d are the background reflection and transmission coefficients of a corresponding uniform slab at the resonant frequency ω_0. The plus/minus signs correspond to resonant modes with even and odd symmetry with respect to the mirror plane parallel to the surface of the slab. (See for example, S. Fan, W. Suh and J. D. Joannopoulos, "Temporal coupled mode theory for Fano resonance in optical resonators", Journal of Optical Society of America A ~~(18, 162, 2001).~~ (20, 3, 2003). The right hand side of equation (1) describes the interference of two pathways that contribute to the transmission and reflection processes. The first term represents a direct pathway, in which incident light passes through the slab without exciting the guided resonance. The second term represents a resonant pathway, in which the incident light excites the guided resonance, followed by a decay of the power in the guided resonance.

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